Ginna
1Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2014
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Work Packages Associated with Maintenance on the Main Generator Exciter Air Cooler Reversing Head
A self-revealing Green finding was identified for inadequate development and maintenance of work packages as required by Exelon Generation Company, LLC (Exelon) procedure CNG-MN-4.01-1003, "Work Order Planning," Revision 00701. Specifically, the work packages associated with maintenance on the main generator exciter air cooler reversing head did not adequately incorporate and comply with vendor recommendations, which resulted in a service water leak on the reversing chamber of the generator exciter air cooler, a rapid downpower, and shutdown of the reactor.

This finding is more than minor because it is associated with the procedure quality attribute of the Initiating Events cornerstone and affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the work packages associated with maintenance on the main generator exciter air cooler reversing head did not adequately incorporate and comply with vendor specifications, which resulted in a service water leak on the reversing chamber of the generator exciter air cooler, a rapid downpower, and shutdown of the reactor. Additionally, the finding is similar to Example 4.b of Inspection Manual Chapter (IMC) 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," in that a performance deficiency caused a transient. In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 of IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," the inspectors determined that this finding is of very low safety significance (Green) because the finding did not cause a reactor trip and the loss of mitigation equipment relied upon to transition the plant from the onset of a trip to a stable shutdown condition. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Identification, because Exelon did not implement a corrective action program with a low threshold for identifying issues, and individuals did not identify issues completely, accurately, and in a timely manner in accordance with the program. Specifically, Exelon staff did not initiate condition reports and document reversing head material deficiencies identified by Exelon's vendor and recommended for repair in 2009, 2012, and 2014 [P.1].

Inspection Report# : 2014004 *(pdf)*

Significance: G Jun 30, 2014
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Inadequate Procedure Implementation Results in Inadvertent Engineered Safety Feature Actuation
A self-revealing Green non-cited violation of Technical Specification 5.4.1, "Procedures," was identified for failure to perform maintenance as required by Exelon Generation Company, LLC (Exelon) procedure STP-I-9.1.16, "Undervoltage Protection – 480 Volt Safeguard Bus 16," Revision 01001. Specifically, while performing Step 6.4.2.1 to place the BX1/16 relay toggle switch in the trip position, an incorrect switch manipulation by an instrumentation

and control technician resulted in an engineered safety feature actuation, which included the automatic start of the 'B' emergency diesel generator (EDG) and the de-energization of a safety-related bus. Immediate corrective actions included restoring bus 16 to its normal power supply and entering this issue into the corrective action program as condition report (CR)-2014-002741.

The finding was more than minor because it is associated with the human performance attribute of the Initiating Events cornerstone and affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, due to a personnel error, an incorrect switch was manipulated during bus 16 undervoltage testing. This resulted in the automatic start of the 'B' EDG, the de-energization of bus 16, and the transition of the outage defense-in-depth from a Green to a Yellow risk condition. The inspectors evaluated the finding using Inspection Manual Chapter (IMC) 0609, Attachment 0609.04, "Initial Characterization of Findings." This attachment directed the inspectors to evaluate the finding using IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." However, IMC 0609, Appendix G, directed the inspectors to contact the senior risk analyst for assistance as it does not apply when there are no fuel assemblies in the reactor vessel. The senior risk analyst directed the inspectors to evaluate the finding using Appendix M, "Significance Determination Process Using Qualitative Criteria," which directed the inspectors to consider a bounding case. For this instance, if the bus had not been recovered with the fuel in the spent fuel pool, the only significant system lost would have been the redundant spent fuel pool cooling system. Therefore, the inspectors determined the finding to be of very low safety significance (Green). This finding has a cross-cutting aspect in the area of Human Performance, Avoid Complacency, because Exelon personnel did not recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Specifically, Exelon personnel did not implement appropriate error reduction tools or consider the potential undesired consequence of an engineered safety feature actuation before performing work [H.12].

Inspection Report# : 2014003 *(pdf)*

Mitigating Systems

Significance: G Mar 31, 2015
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Inadequate Corrective Actions Result in Failure of Bus 18 Undervoltage Solid State Switchboard Card
A self-revealing Green non-cited violation of Title 10 of the Code of Federal Regulations (10 CFR), Appendix B, Criterion XVI, "Corrective Action," was identified for failure to establish measures to assure that a condition adverse to quality associated with the availability of the bus 18 solid state switchboard card (SS1) was promptly identified and corrected. Specifically, Ginna did not adequately complete previous corrective actions to ensure carbon resistors in risk-significant components were identified and replaced in a timely manner prior to the occurrence of age-related failures, which resulted in the failure of a safety-related bus undervoltage solid state switchboard card and indication of an undervoltage condition.

The inspectors determined that the failure to implement corrective actions to identify and correct a condition adverse to quality was a performance deficiency within Exelon Generation Company's, LLC (Exelon's) ability to foresee and correct and should have been prevented. Specifically, Exelon failed to adequately execute corrective actions to identify and replace carbon resistors in risk-significant components, which resulted in a failure of the bus 18 undervoltage solid state switchboard card. The inspectors determined that the failure to implement corrective actions was more than minor, because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that

respond to initiating events to prevent undesirable consequences. Specifically, technical specifications (TSs) require each safeguard bus to have two operable channels of loss of power diesel generator start instrumentation. However, this failure caused one channel to be declared inoperable and resulted in operators entering the TS action statement. Additionally, the bus 18 undervoltage solid state switchboard card failed while in service, incurred unnecessary unavailability hours, provided false indication of an undervoltage condition, and resulted in a maintenance preventable functional failure.

The inspectors evaluated the finding using Inspection Manual Chapter (IMC) 0609.04, “Initial Characterization of Findings.” The attachment instructs the inspectors to utilize IMC 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power.” The inspectors determined the self-revealing performance deficiency was not a deficiency affecting the design or qualification of a mitigating structure, system, and component; did not represent a loss of system and/or function; and did not represent an actual loss of function of at least a single train. Therefore, the inspectors determined this finding to be of very low safety significance (Green).

In accordance with IMC 0612, the finding does not have a cross-cutting aspect, because the performance deficiency occurred more than 3 years ago, would not likely occur today under similar circumstances, and is not reflective of present plant performance. In June 2011, when the performance deficiency occurred, the work planning process did not require the use of formal documentation, and briefings were not required for risk-significant work. However, today documentation and briefings are both required for risk-significant work done in the plant. Additionally, Exelon technicians replaced the failed card, completed an extent-of-condition review, and entered the issue into the corrective action program.
Inspection Report# : 2015001 *(pdf)*

Significance: G Aug 22, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Test Control for Main Steam Isolation Valve (MSIV) Solenoid-Operated Valves
The inspectors identified a finding of very low safety significance involving a non-cited violation of Title 10 of the Code of Federal Regulations (10 CFR) 50, Appendix B, Criterion XI, "Test Control," in that Exelon Generation Company, LLC (Exelon) did not assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service were identified and performed in accordance with written test procedures. Specifically, the inspectors determined that the solenoid-operated valves that actuate the MSIVs were not satisfactorily (independently) tested to demonstrate that the isolation valves would perform satisfactorily in service. In response, Exelon entered the issue into the corrective action program, evaluated current operability, and initiated efforts to develop satisfactory testing methods.

The finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding did not have a cross-cutting aspect because the most significant contributor of the performance deficiency was not reflective of current licensee performance.
Inspection Report# : 2014007 *(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G Mar 31, 2015
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Inadequate Protective Action Recommendation Flowchart
A self-revealing Green non-cited violation of Title 10 of the Code of Federal Regulations (10 CFR) 50.54(q)(2), 10 CFR 50.47(b)(10), and 10 CFR 50, Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," Section IV.B.1, was identified for Exelon Generation Company, LLC (Exeon) inadequately maintaining the effectiveness of its Emergency Plan. Specifically, 10 CFR 50.54(q)(2) requires reactor licensees to follow and maintain the effectiveness of an emergency plan that meets the requirements in 10 CFR 50, Appendix E, and the planning standards of 50.47(b), and Exelon did not adequately maintain the effectiveness of its Emergency Plan when Exelon implemented changes to the protective action recommendation (PAR) flowchart that would have resulted in Exelon inappropriately recommending evacuation of downwind areas and many more emergency response planning areas (ERPAs) than intended.

The inspectors determined that Exelon did not adequately maintain the effectiveness of its Emergency Plan in accordance with 10 CFR 50.54(q)(2), 10 CFR 50.47(b), and 10 CFR 50, Appendix E, when Exelon implemented changes to the PAR flowchart. Specifically, Exelon implemented Figure 5.3, "Scheme for Protective Action Recommendations," of the Nuclear Emergency Response Plan (NERP), and Attachment 3, "Ginna PAR Determination Instructions," of CNG-EP-1.01-1013, "Emergency Classification and PAR," Revision 00100, and the flowchart for "Initial Protective Action Recommendation ONLY," with an unintentional error. Incorrectly revising and incorporating an inaccurate value in the implementing procedures for the NERP is considered a performance deficiency that was within Exelon's ability to foresee and prevent. The inspectors determined that the inadequate maintenance of the Emergency Plan was more than minor, because it was associated with the procedure quality attribute of the Emergency Preparedness cornerstone and affected the cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Specifically, Exelon's PAR implementation procedure was revised and contained containment radiation level set points that would potentially result in an inappropriate recommendation to evacuate downwind areas and many more ERPAs than intended when fewer or no evacuations should have been recommended. The inspectors evaluated the finding using Inspection Manual Chapter (IMC) 0609.04, "Initial Characterization of Findings." The attachment instructs the inspectors to utilize IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process," when the finding impacts the licensee's Emergency Preparedness cornerstone.

The performance deficiency is associated with the emergency protective actions planning standard and is considered a risk-significant planning standard function. The inspectors were directed by the SDP to compare the performance deficiency with the examples in Section 5.10, "10 CFR 50.47(b)(10), Emergency Protective Actions," to evaluate the significance of this performance deficiency. However, the examples in Table 5.10-1, "Significance Examples §50.47 (b)(10)," address failure to make a PAR, but the examples do not specifically address unnecessary evacuations of ERPAs. Therefore, in accordance with the guidance in Section 5.0.3 of IMC 0609, Appendix B, the issue was evaluated using the Attachment 2 flowchart and informed by the examples provided in other sections of the Emergency Preparedness SDP as described below.

In the subject scenario, the licensee will have already accurately made a General Emergency declaration prior to determining an initial PAR. At the General Emergency level, there is at least a loss of two fission product barriers and

a potential or full loss of a third, and a release is either in progress or imminent at levels that are likely to exceed Environmental Protection Agency protective action guidelines (PAGs) at and beyond the site boundary. As such, there is potentially a dose avoidance benefit for the public even when a PAG has not been reached due to a General Emergency condition actually existing. Therefore, an inadequate PAR resulting in evacuations of ERPAs when no evacuations are otherwise called for is less significant than an emergency action level overclassification resulting in an unnecessary PAR, because there is a potential dose avoidance benefit to the public at the General Emergency level. In this instance, a PAR is made, which is sufficient to ensure public health and safety, although some additional risk will be incurred. The (b)(10) risk-significant planning standard functions are still met, although Exelon did fail to comply with the planning standard. Therefore, the inspectors determined the finding was of very low safety significance (Green). Exelon corrective actions included issuing NERP, Revision 04000, and CNG-EP-1.01-1013, Revision 00200, which corrected the PAR flowchart text ensuring all emergency directors were adequately trained and aware of the NERP and CNG-EP-1.01-1013 revisions.

The finding has a cross-cutting aspect in the area of Human Performance, Change Management, because Exelon did not use a systematic process for evaluating and implementing change so that nuclear safety remained the overriding priority. Specifically, changes to the NERP were made, and the inadequate change and the importance of the changes were not recognized by Exelon corporate, the department review, or the plant operations review committee review. Managers did not ensure individuals understood the importance of, and their role in, the change management process, and managers did not maintain a clear focus on nuclear safety when implementing the change management process to ensure that significant unintended consequences were avoided [H.3].

Inspection Report# : 2015001 *(pdf)*

Occupational Radiation Safety

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Last modified : June 16, 2015